



Department of Energy  
Washington, DC 20585  
April 3, 2000

Docket Clerk  
RCRA Information Center  
U.S. Environmental Protection Agency  
Crystal Gateway I, First Floor  
1235 Jefferson Davis Highway  
Arlington, Virginia 22202

**Docket Number F-2000-PCBP-FFFFF**

Dear Sir or Madam:

*Re: 65 FR 7809, "Deferral of Phase IV Standards for PCBs as an Underlying Hazardous Constituent in Soil"*

On February 16, 2000, the Environmental Protection Agency (EPA) published a proposed rule in the *Federal Register* regarding the land disposal restriction (LDR) treatment standards applicable to metal-contaminated soils which also contain polychlorinated biphenyls (PCBs). Specifically, EPA is proposing a temporary deferral of the LDR requirement to treat PCBs in soils that exhibit the toxicity characteristic (TC) for metals. As explained in the notice, EPA is proposing this action because the existing requirement appears to be delaying cleanups and discouraging remediation of such contaminated soils. In addition, the proposed deferral would allow EPA to investigate further the relationship of the LDR requirements for PCBs with the requirements applicable to PCB remediation wastes under other regulatory programs.

The Department of Energy (DOE) appreciates the opportunity to comment on this LDR-related proposed rule. DOE supports the proposed temporary deferral of the requirement to treat PCBs in soils that exhibit the TC for metals, and agrees with the Agency's reasons for considering such a deferral. However, certain concerns are raised in the enclosed comments with respect to implementation of the proposed deferral. For instance, DOE found the term "underlying hazardous constituents" to be used inaccurately in place of the term "constituents subject to treatment" in certain instances, making the discussion of the proposed deferral somewhat confusing. The enclosed comments also request clarification with respect to the assertion that the 1,000 ppm level [referring to the California List provision in RCRA section 3004(d)(2)(E)] would provide an upper bound of PCBs that can be in contaminated soil without triggering LDR requirements. Furthermore, the Department is concerned that the proposed regulatory language may not reflect the intended scope of the proposed deferral. In this regard, the enclosed comments include suggestions for revising and expanding the proposed regulatory text.

In addition, the enclosed comments request that EPA address a fundamental inconsistency between the RCRA LDR treatment standards and the PCB megarule that is problematic for certain non-soil wastes that exhibit the TC for metals and contain PCBs. Also, in response to EPA's request for comment, DOE asserts that it would be appropriate for the Agency to extend both the investigation of LDR treatment standards for contaminated soil containing PCBs and the proposed deferral, to situations involving soil containing listed hazardous waste.

These comments are divided into two sections: general and specific. The general comments provide overarching positions and reactions to the discussions in the proposed rule. The specific comments relate directly to discussions and issues raised in particular sections of the proposed rule. For clarity, each specific comment is preceded by a reference to the section of the proposed rule to which it applies, and a brief description is given in boldface type of the issue within that section to which DOE's comment is directed.

If you have any questions or need further clarification of our comments, please contact Bill Fortune of my staff at (202) 586-7302 or [william.fortune@eh.doe.gov](mailto:william.fortune@eh.doe.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'T. Traceski', followed by a vertical line.

Thomas T. Traceski  
Director, RCRA/CERCLA Division  
Office of Environmental Policy and Guidance

Enclosure

cc: E. Brown, EPA, Office of Solid Waste (5303W)  
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**UNITED STATES  
DEPARTMENT OF ENERGY**

**Comments On  
*DEFERRAL OF PHASE IV STANDARDS FOR  
PCBs AS AN UNDERLYING HAZARDOUS  
CONSTITUENT IN SOIL***

**Proposed Rule  
(65 FR 7809 - 7814; February 16, 2000)**

**UNITED STATES DEPARTMENT OF ENERGY**  
**Comments on**  
**DEFERRAL OF PHASE IV STANDARDS FOR**  
**PCBs AS AN UNDERLYING HAZARDOUS CONSTITUENT IN SOIL**

**PROPOSED RULE**  
**(65 FR 7809 - 7814; February 16, 2000)**

**GENERAL COMMENTS**

1. DOE supports the proposed deferral of the requirement to treat polychlorinated biphenyls (PCBs) in soils exhibiting the toxicity characteristic (TC) for metals. The requirement to treat PCBs in hazardous soils exhibiting the TC for metals was first imposed by the Land Disposal Restrictions (LDR) Phase IV regulations promulgated by EPA on May 26, 1998 (63 FR 28556). DOE concurs that the requirement can act to discourage the cleanup of soils exhibiting the TC for metals and that more study of the issue of appropriate treatment standards for metal-contaminated soils containing PCBs is needed, which are two of the reasons EPA gives for the proposed deferral (65 FR 7810 - 7811). In addition, DOE agrees with EPA's third reason for proposing the deferral -- that better integration is needed between the LDR treatment standards for PCBs and the PCB regulations which EPA issued in June 1998 (referred to as the PCB megarule) under the Toxic Substances Control Act (TSCA) (see 63 FR 35384; June 29, 1998).
2. As part of the EPA proposed effort to investigate further the relationship of the Resource Conservation and Recovery Act (RCRA) regulations with those applicable to PCB wastes under TSCA, DOE requests that the Agency address a fundamental inconsistency between the PCB megarule and RCRA LDR treatment standards that is problematic for certain wastes exhibiting the TC for metals and also containing PCBs. Specifically, the PCB megarule (40 CFR Part 761) allows disposal (i.e., without any prior treatment) of PCB bulk product waste in municipal and non-municipal nonhazardous waste landfills (which previously would have been required to be disposed by incineration, or in landfills designated as both chemical and hazardous waste landfills).<sup>1</sup> In contrast, under the LDR treatment standards applicable to nonwastewaters exhibiting a hazardous characteristic (i.e., ignitability, reactivity, corrosivity, or toxicity), the waste must be treated before disposal to address the hazardous characteristic and to reduce, remove, or immobilize any underlying hazardous constituents,<sup>2</sup> including PCBs, to levels below concentrations stated in the list of Universal Treatment Standards (UTS) (40 CFR 268.48). The UTS level for total PCBs is 10 ppm. Accordingly, some PCB bulk product wastes exhibiting the TC for metals, which would not require any treatment prior to disposal under the PCB megarule, would require treatment under the RCRA LDR program to reduce, remove, or immobilize PCBs to less than 10 ppm, as well as treatment to address the hazardous characteristic(s) of the waste.

In the case of TC metal wastes containing PCBs, the required treatments would involve some type of thermal destruction (for the PCBs) and chemical stabilization (for the toxic metals). However, RCRA regulations prohibit combustion of certain wastes, including TC metal wastes (unless they

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<sup>1</sup> *PCB bulk product waste* means waste derived from manufactured products containing PCBs in a non-liquid state, at any concentration where the concentration at the time of designation for disposal was  $\geq 50$  ppm PCBs (40 CFR 761.3). Such disposal of PCB bulk product waste must be conducted in accordance with the applicable provisions specified in 40 CFR 761.62.

<sup>2</sup> *Underlying hazardous constituent* means any constituent listed in §268.48, Table UTS—Universal Treatment Standards, except fluoride, selenium, sulfides, vanadium, and zinc, which can reasonably be expected to be present at the point of generation of the hazardous waste at a concentration above the constituent-specific UTS treatment standards. (40 CFR 268.2(i))

are shown to comply with specified criteria) (40 CFR 268.3(c)). In addition, assuming a TC metal waste containing PCBs meets the criteria that would allow its combustion, the availability of thermal destruction treatment facilities for such wastes is often limited. Hence, DOE suggests that EPA consider extending the proposed deferral of the requirement to treat PCBs in soils exhibiting the TC for metals to encompass a deferral of the requirement to treat PCBs in other non-soil TC metal wastes, which meet the definition of PCB bulk product waste and qualify for disposal without treatment under the PCB megarule. A significant example of actual wastes that could benefit from such a deferral include contaminated paint chips that contain PCBs and also exhibit the TC for certain metals (e.g., lead and/or chromium).

3. DOE is also concerned by EPA's use of the term "underlying hazardous constituent" (or UHCs) throughout the preamble. This is a term which 40 CFR 268.2(i) defines to mean: *"any constituent listed in §268.48, Table UTS—Universal Treatment Standards, except fluoride, selenium, sulfides, vanadium, and zinc, which can reasonably be expected to be present at the point of generation of the hazardous waste at a concentration above the constituent-specific UTS treatment standards."* In some cases, the term is used correctly in the preamble, but in general, it is incorrectly used as a substitute for the term "constituents subject to treatment," which is defined in 40 CFR 268.49, "Alternative LDR Treatment Standards for Contaminated Soil," as follows: *"any constituents listed in 40 CFR 268.48, Table UTS—Universal Treatment Standards that are reasonably expected to be present in any given volume of contaminated soil, except fluoride, selenium, sulfides, vanadium and zinc, and are present at concentrations greater than ten times the universal treatment standard."* DOE found this incorrect usage of terms to be confusing and suggests that it be corrected in the final rule. Several instances where incorrect usage of the term "UHCs" instead of "constituents subject to treatment" that are particularly confusing are discussed in the specific comments provided below.

## **SPECIFIC COMMENTS**

### **IV. Background**

#### **IV.D. Underlying Hazardous Constituents**

**1. p. 7810, cols. 2 & 3 – The preamble states as follows:**

**Importantly for the present proposal, the existing standards further require that generators treat all UHC in contaminated soils. See 63 FR 28608-28609; 40 CFR 268.49(d) [sic; probably should reference 268.49(b)-(c)]. A “UHC,” for this purpose, is any hazardous constituent that might be present in the soil at levels exceeding 10 times the Universal Treatment Standard for that constituent. See 40 CFR 268.49(d). ”**

As DOE understands the LDR regulations, the preamble passage quoted above contains certain inaccuracies that introduce considerable confusion into the proposed deferral of the requirement to treat PCBs in soil exhibiting the TC for metals. First, as previously mentioned in General Comment 3, 40 CFR 268.2(i) defines the term “UHC,” while 40 CFR 268.49(d) defines the term “constituents subject to treatment.” The definition for “UHC” given in the above quote from the preamble is very similar to the definition given in 40 CFR 268.49(d) for the term “constituents subject to treatment.” DOE suggests that EPA correct this inaccuracy in the final rule.

Next, the existing LDR treatment standards do not “require that generators treat all UHC in contaminated soils,” as the above quote indicates. 40 CFR 268.49(b) states that contaminated soil required to comply with LDR requirements “must be treated according to the applicable treatment standards specified in this paragraph [i.e., the alternative LDR treatment standards for contaminated soil] *or* according to the Universal Treatment Standards specified in 40 CFR 268.48 applicable to the contaminating listed hazardous waste and/or the applicable characteristic of hazardous waste if the soil is characteristic.” (emphasis added). In other words, the generator of contaminated soil may choose between two possible sets of LDR treatment standards: the set that would apply to the waste contained in the soil, or the alternative set of LDR treatment standards for contaminated soil.

In cases where the contaminated soil exhibits a hazardous characteristic (i.e. ignitability, corrosivity, reactivity, or toxicity) and the generator chooses to meet LDR requirements by complying with the treatment standards that apply to hazardous wastes which exhibit that characteristic, the generator would be required to treat UHCs in the contaminated soil. If the contaminated soil contained a listed hazardous waste, and the generator chose to meet LDR requirements by complying with the treatment standards applicable to the listed waste (40 CFR 268.40), such treatment would involve meeting (in the soil) the UTS concentration levels specified for particular constituents in the listed waste (when the LDR treatment standards for the listed waste takes the form of constituent concentration levels). In this circumstance, evaluation of or treatment for UHCs would not be necessary. In the event the LDR treatment standards established for a listed waste contained in contaminated soil takes the form of a specified technology, and the generator chose to meet LDR requirements by complying with the treatment standards applicable to the listed waste, treatment of the soil using the specified technology would be required. DOE is not aware that identification or treatment of UHCs would be required. [See 63 FR 42110, 42168 (August 6, 1998)] If the generator chose to meet LDR requirements by complying with the alternative treatment standards for contaminated soil, all constituents subject to treatment (i.e., hazardous constituents that are reasonably expected to be present at concentrations greater than 10 X the UTS) must be treated to meet the standards specified in 40 CFR 268.49(c). DOE is not aware that identification or treatment of UHCs (as defined in 40 CFR 268.2(i)) would be required. DOE suggests that EPA clarify discussions in the preamble to the final rule, as necessary, in consideration of the above information.

2. **p. 7810, col. 3** — Referring to the California List provision in RCRA section 3004(d)(2)(E), EPA states that “... in the absence of the Phase IV PCB standards, the 1000 ppm level would be the upper bound of PCBs that can be in contaminated soil without triggering LDR treatment requirements ... .”

DOE believes it would be helpful to the regulated community if EPA would discuss further in the final rule (or at least reference previous explanations, such as the one given in the LDR Phase IV rule published at 62 FR 25998, 26005 (05/12/97)) why the regulations codifying the statutory LDR limitations for California List wastes were removed. As EPA explained in the 1997 LDR Phase IV final rule:

California List prohibitions no longer apply once a more specific treatment standard applies ... . With the advent of the requirement to treat for UHCs reasonably expected to be present in characteristic wastes, there no longer are any situations where California List prohibitions could create an exclusive treatment standard. Consequently, there is no need to retain any reference to California List prohibitions in the regulations.

DOE is concerned that the regulated community believes the statutory provisions of RCRA section 3004(d)(2)(E) no longer apply because the codifying regulations were previously deleted. As a result, EPA’s current proposal to recodify the RCRA 3004(d)(2)(E) prohibition on land disposal of waste containing halogenated organic compounds (HOCs) (during the period of the proposed deferral) is likely to be confusing.

Adding to the confusion is EPA’s assertion that the California List provision in RCRA section 3004(d)(2)(E) would place a cap of 1000 mg/kg on only the PCB concentration in hazardous soils (rather than the total concentration of HOCs). Section 3004(d)(2)(E) of RCRA states that land disposal of “hazardous wastes containing *halogenated organic compounds* in *total concentration* greater than or equal to 1000 mg/kg” is prohibited. This statutory language leads DOE to conclude that an allowable concentration of PCBs in hazardous soils (i.e., a single maximum concentration of PCBs which would trigger the RCRA prohibition on land disposal) cannot be determined, without assuming that no other HOCs will be present. However, DOE is not aware of any justification for making such an assumption in the case of hazardous soils. Consequently, DOE requests clarification of why EPA believes that the statutory limitation of 1000 mg/kg total concentration on HOCs in hazardous waste destined for land disposal can be applied as if PCBs were the only HOC for purposes of the proposed deferral.

## **V. Need to Defer the Phase IV Rule**

### **V.C. What is the Effect of the Deferral?**

1. **p. 7811, col. 3** — EPA states that the Agency is proposing only to defer the regulations which establish PCBs as a UHC in soils exhibiting the TC for metals. EPA notes, however, that the requirement to treat PCBs in hazardous soils would also apply in a situation involving soil that is hazardous because it contains a listed hazardous waste, if the generator elects to comply with the alternative LDR treatment standards for hazardous soil. EPA requests comment on whether, in such circumstances, PCBs should continue to be a designated UHC requiring treatment in the affected soil.

DOE believes it would be appropriate for EPA to extend both the investigation of appropriate LDR treatment standards for contaminated soil containing PCBs and the proposed deferral to situations involving soil containing listed hazardous waste. However, if the final rule defers the requirement to treat PCBs in soil contaminated with listed hazardous waste, DOE requests that EPA clarify whether the deferral applies to contamination consisting of any listed hazardous waste, or only to contamination consisting of wastes listed due to the presence of toxic metals. [For purposes of this comment, DOE assumed the term “UHC,” as used

in the section V.C. of the preamble, to be synonymous with “constituents subject to treatment.” (See General Comment 3, above.)]

### **Proposed Regulatory Text**

1. **p. 7814, col. 3** — EPA proposes to add section 40 CFR 268.32, which would read as follows:  
“Effective [insert effective date of final rule], hazardous wastes containing halogenated organic compounds in total concentrations greater than or equal to 1000 mg/kg are prohibited from land disposal.”

DOE believes this proposed language could be interpreted to reinstate the California list provisions of RCRA much too broadly. For example, rather than simply prohibiting land disposal of soil exhibiting the TC for metals and containing PCBs above 100 ppm, the proposed language could be interpreted to prohibit land disposal of non-soil hazardous wastes containing a total of 1000 mg/kg HOCs. Also, the proposed language could be interpreted to prohibit land disposal of hazardous soils which contain no PCBs, but which contain non-PCB HOCs in concentrations of 1000 mg/kg or greater. Accordingly, DOE recommends that EPA consider revising the proposed text of 40 CFR 268.32 to more clearly limit the intended scope of the prohibition on land disposal. For example, the proposed text of 40 CFR 268.32 might be revised to read as follows:

#### **268.32 Waste specific prohibitions — Soils exhibiting the toxicity characteristic for metals and containing PCBs.**

(a) Effective [insert date of publication of final rule], the following wastes are prohibited from land disposal: soil contaminated with EPA hazardous waste numbers D004 - D011 (as measured by the Toxicity Characteristic Leaching Procedure) and containing PCBs.

(b) The requirements of paragraphs (a) of this section do not apply if:

- (1) (a) The wastes contain halogenated organic compounds in total concentration less than 1000 mg/kg; and  
(b) the wastes meet the treatment standards specified in Subpart D of this part for EPA hazardous waste numbers D004 - D011, as applicable; or
- (2) (a) The wastes contain halogenated organic compounds in total concentration less than 1000 mg/kg; and  
(b) the wastes meet the alternative treatment standards specified in 40 CFR 268.49 for contaminated soil; or
- (3) Persons have been granted an exemption from a prohibition pursuant to a petition under §268.6, with respect to those wastes and units covered by the petition; or
- (4) The wastes meet applicable alternative treatment standards established pursuant to a petition granted under §268.44.

DOE submits that the above-suggested regulatory language is consistent with the statutory prohibition in RCRA 3004(d)(2)(E) on land disposal of hazardous wastes containing HOCs in total concentration greater than or equal to 1000 mg/kg for which EPA has established no LDR treatment standard. In this case, the waste for which no LDR treatment standard exists will be: soils exhibiting the TC for metals and containing PCBs. LDR treatment standards will remain in place for all other hazardous wastes containing HOCs in total concentration greater than or equal to 1000 mg/kg. For this reason, it is appropriate to confine



codification in 40 CFR 268.32 of the RCRA 3004(d)(2)(E) prohibition just to soils exhibiting the TC for metals and containing PCBs.

The regulatory language suggested above, also specifies options available to the generator that exist within the LDR regulatory program. Such language is consistent with other sections of 40 CFR Part 268, Subpart C, “Prohibitions on Land Disposal.” (See, for example, 40 CFR 268.34.)

2. **p. 7814, col. 3** – EPA proposes to amend section 268.49 by revising paragraph (d) to read as follows:

**(d) *Constituents subject to treatment.* When applying the soil treatment standards in paragraph (c) of this section, constituents subject to treatment are any constituents listed in 40 CFR 268.48 Table UTS- Universal Treatment Standards that are reasonably expected to be present in any given volume of contaminated soil, except fluoride, selenium, sulfides, vanadium, zinc, and PCB’s when present in soils exhibiting the characteristic of toxicity solely because of presence of metals, at concentrations greater than ten times the universal treatment standard.**

For consistency with the regulatory language suggested for 40 CFR 268.32 in item 1, above, DOE suggests that EPA expand and change the above-quoted regulatory text in the following manner.

- a. Section 268.48 is amended by adding footnote 8 to the entry “Total PCBs (sum of all PCB isomers or all Aroclors)” in the column with the heading “Regulated Constituent Common Name” in Table UTS, and modifying the entry itself, as follows:

**§268.48 Universal Treatment Standards.**

\* \* \* \* \*

**UNIVERSAL TREATMENT STANDARDS NOTE:** NA means not applicable

REGULATED CONSTITUENT Common Name	CAS Number	Wastewater Standard	Nonwastewater Standard
		Concentration in mg/l	Concentration in mg/kg unless noted as “mg/l TCLP”

...

Total PCBs (sum of all PCB congeners, or all Aroclors) <sup>8</sup>	1336-36-3	0.10	10
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...

**FOOTNOTES TO TABLE UTS**

...

<sup>8</sup> This constituent is not an underlying hazardous constituent as defined at §268.2(i) of this part in soils contaminated with EPA hazardous waste numbers D004 - D011 (as measured by the Toxicity Characteristic Leaching Procedure).

\* \* \* \* \*

- b. Section 268.49 is amended by revising paragraph (d) to read as follows:

**§268.49            Alternative LDR treatment standards for contaminated soil.**

\* \* \* \* \*

(d) *Constituents subject to treatment.* When applying the soil treatment standards in paragraph (c) of this section, constituents subject to treatment are any constituents listed in 40 CFR 268.48, Table UTS—Universal Treatment Standards that are reasonably expected to be present in any given volume of contaminated soil, except fluoride, selenium, sulfides, vanadium and zinc, and that are present at concentrations greater than ten times the universal treatment standard. Notwithstanding, PCBs are not a constituent subject to treatment in soils contaminated with EPA hazardous waste numbers D004 - D011 (as measured by the Toxicity Characteristic Leaching Procedure).

\* \* \* \* \*